

AMENDMENTS TO THE CLAIMS

1. (Previously presented) An electric power generating element for a fuel cell comprising:
 - a positive electrode for reducing oxygen;
 - a negative electrode for oxidizing a fuel; and
 - a solid electrolyte provided between the positive electrode and the negative electrode;wherein at least the negative electrode selected from the positive electrode and the negative electrode comprises a laminate of at least two electrode layers each containing a catalyst,
 - each of the electrode layers has a thickness of at most 50 μm , and
 - an adhesive layer is disposed between the electrode layers,wherein the adhesive layer contains a polymer material having a proton conducting property.
2. (Canceled)
3. (Previously presented) The electric power generating element for a fuel cell according to claim 1, wherein the electrode layers contain a polymer material similar to the polymer material contained in the adhesive layer.
4. (Original) The electric power generating element for a fuel cell according to claim 1, wherein the catalyst contained in each of the electrode layers has a mass per unit electrode area of 0.3 to 3 mg/cm^2 .
5. (Original) The electric power generating element for a fuel cell according to claim 1, wherein the adhesive layer has a thickness of 1 to 5 μm .

6. (Original) The electric power generating element for a fuel cell according to claim 1, wherein the laminate has a total thickness of 30 to 300 μm .

7. (Previously presented) An electric power generating element for a fuel cell comprising:
a positive electrode for reducing oxygen;
a negative electrode for oxidizing a fuel; and
a solid electrolyte provided between the positive electrode and the negative electrode;
wherein at least the negative electrode selected from the positive electrode and the negative electrode comprises a laminate of at least two electrode layers each containing a catalyst and a polymer material having a proton conducting property,
each of the electrode layers has a thickness of at most 50 μm , and
the polymer material is present more in an interface part of each of the electrode layers than in an inner part thereof.

8. (Original) The electric power generating element for a fuel cell according to claim 7, wherein the catalyst contained in each of the electrode layers has a mass per unit electrode area of 0.3 to 3 mg/cm^2 .

9. (Original) The electric power generating element for a fuel cell according to claim 7, wherein the laminate has a total thickness of 30 to 300 μm .

10. (Previously presented) A fuel cell comprising:
an electric power generating element for a fuel cell comprising
a positive electrode for reducing oxygen,
a negative electrode for oxidizing a fuel, and
a solid electrolyte provided between the positive electrode and the negative electrode;

wherein at least the negative electrode selected from the positive electrode and the negative electrode comprises a laminate of at least two electrode layers each containing a catalyst,

each of the electrode layers has a thickness of at most 50 μm , and

an adhesive layer is disposed between the electrode layers,

wherein the adhesive layer contains a polymer material having a proton conducting property.

11. (Canceled)

12. (Previously presented) The fuel cell according to claim 10, wherein the electrode layers contain a polymer material similar to the polymer material contained in the adhesive layer.

13. (Original) The fuel cell according to claim 10, wherein the catalyst contained in each of the electrode layers has a mass per unit electrode area of 0.3 to 3 mg/cm^2 .

14. (Original) The fuel cell according to claim 10, wherein the adhesive layer has a thickness of 1 to 5 μm .

15. (Original) The fuel cell according to claim 10, wherein the laminate has a total thickness of 30 to 300 μm .

16. (Previously presented) A fuel cell comprising:

an electric power generating element for a fuel cell comprising

a positive electrode for reducing oxygen,

a negative electrode for oxidizing a fuel, and

a solid electrolyte provided between the positive electrode and the negative electrode;

wherein at least the negative electrode selected from the positive electrode and the negative electrode comprises a laminate of at least two electrode layers each containing a catalyst and a polymer material having a proton conducting property,

each of the electrode layers has a thickness of at most 50 μm , and

the polymer material is present more in an interface part of each of the electrode layers than in an inner part thereof.

17. (Original) The fuel cell according to claim 16, wherein the catalyst contained in each of the electrode layers has a mass per unit electrode area of 0.3 to 3 mg/cm^2 .

18. (Original) The fuel cell according to claim 16, wherein the laminate has a total thickness of 30 to 300 μm .

19. (New) An electric power generating element for a fuel cell comprising:

a positive electrode for reducing oxygen;

a negative electrode for oxidizing a fuel; and

a solid electrolyte provided between the positive electrode and the negative electrode;

wherein the negative electrode comprises a laminate of at least two electrode layers, each of the electrode layers containing a catalyst,

each of the electrode layers has a thickness of at most 50 μm ,

the laminate has a total thickness of 70 to 300 μm , and

an adhesive layer containing a polymer material having a proton conducting property is disposed between the electrode layers.

20. (New) The electric power generating element for a fuel cell according to claim 19, wherein the laminate is constituted by two of the electrode layers, and the catalyst contained in the laminate has a mass per unit area of 2.0 to 6.0 mg/cm^2 .

21. (New) A fuel cell comprising the electric power generating element according to claim 19.

Application No. 10/761,128
Amendment dated October 31, 2007
After Final Office Action of July 6, 2007

Docket No.: 5271-0111PUS1

22. (New) A fuel cell comprising the electric power generating element according to claim 20.